

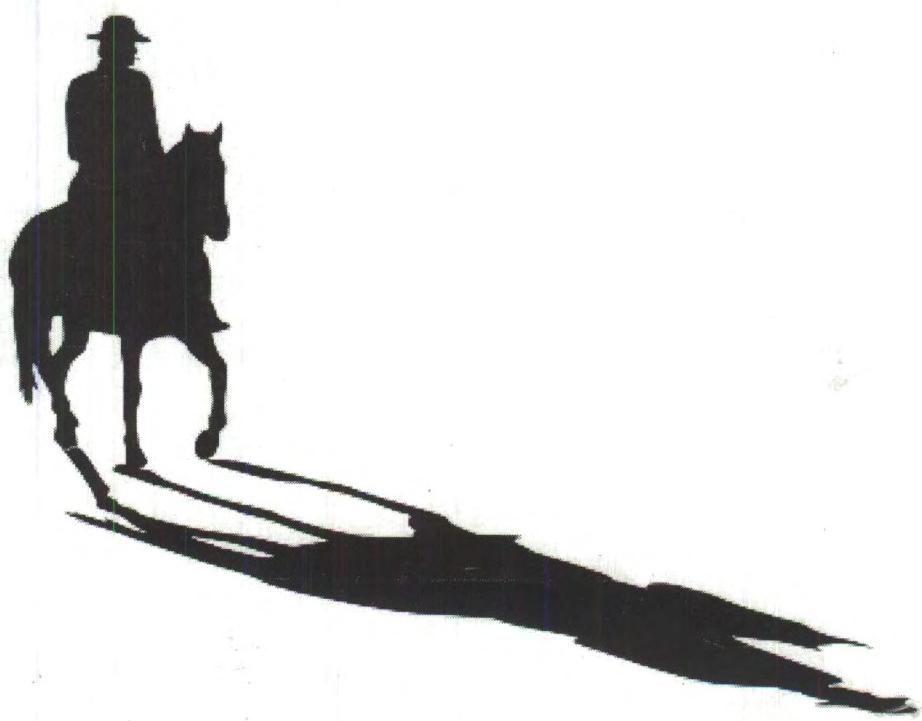
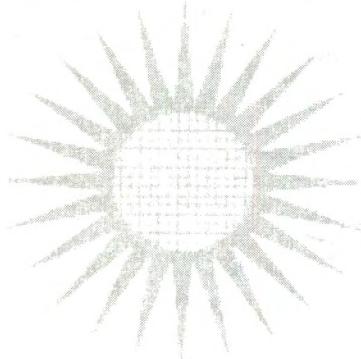
June 1999  
Vol 6 No 6

# extended attributes

The magazine of the OS/2 community



\$2.95 US (\$3.50 Canada)



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extended attributes is the award winning monthly magazine of the Phoenix OS/2 Society, Inc.

This issue of extended attributes was produced using OS/2, DeScribe 5.0.6, WordPro, FrameMaker 5.5.6, Enhanced Editor 6.03, Photo>Graphics Pro, and ImpOS/2. Camera ready images were printed on a Lexmark Optra S 1255 at 1200 dpi. Printing was done by AdCraft Printing, Inc, Phoenix, Arizona.

**Deadline for article submissions** is the 5th of the month prior to issue. Send articles to editor@possi.org or the Society's mailing address. Send reviews to Craig Greenwood, reviews@possi.org. Send SIG news to Ernie Fisch, ernfisch@indirect.com. Send calendar updates to editor@possi.org; entries for any OS/2 user group are accepted.

**For change of address**, send an email to editor@possi.org or mail the form in the center of the magazine to the Phoenix OS/2 Society, Inc.

Mailed bulk rate from Phoenix, Arizona. Note that the US Post Office does not forward bulk rate mail!

Approximate circulation of this issue: 700.

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# What drives IBM

Comment

by Bill Schindler, Editor-in-chief

This last month, there was a discussion on the POSSI list about what drives IBM. When someone suggested that money was the key factor, a couple people expressed dismay. One said, "If that's the way IBM operates, then they've lost whatever creative and entrepreneurial edge they once had..."

But part of IBM does operate purely on the basis of "profits made" and has always operated that way. Most of upper management uses the company's stock price as the key factor in determining the success or failure of the company. However, if you examine IBM's actions over a period of time, you'll discover that profits and stock prices are not the key factors that move the company.

IBM isn't one homogenous thing—it's hundreds of groups pulling in different directions. No real "IBM vision" drives the entire company forward. Then what does drive IBM?

- Technology fads (SOM, Java, OpenDoc, e-Business ...).
- The current ascendant group (legal, sales, R&D ...).
- The current "in view" of who the customer is.
- Inertia (once headed in a direction, it's hard to change).

When you mix those together, you get the thing we call IBM... this month.

There are many groups in IBM that continually fight to get some small piece of the corporate mindshare. The results often leak out in odd places.

For example, Linux is an "in technology" with the ascendant group. If you're in another group and you want to get your product shipped, you have to somehow make it look like you're supporting the current fad.

For example, if you're in the speech engine group, and you want to get speech onto another platform, you chase the fad. You build a speech engine for Linux. It doesn't matter if doing that matches what marketing says (unless marketing is ascendant) or what legal thinks (unless...) or even if it makes sense in the overall picture.

From the outside, it looks like IBM has momentarily lost its mind. But the fact is that IBM has no single mind to lose. There's no one single IBM. There are lots of groups battling to move the company one tiny step in the direction that each group is trying to go. The only reason that there appears to be a single mostly-consistent vision is because of a current technology fad pushed by the ascendant group using an "in view" of the customer, all carried along by inertia. ☺

## Phoenix OS/2 Society, Inc

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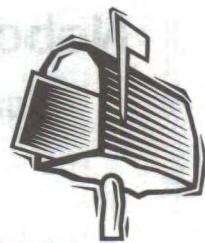
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# Letters

Letters to the editor should be sent to editor@possi.org or mailed to the Phoenix OS/2 Society. We reserve the right to edit all letters for content, readability, and length.



## A pen, my word!

I enjoyed Esther Schindler's article on "The Write Stuff" very much. I think it was one of the best of hers that I have ever read. She touched all the bases. Documentation is such a complex problem that I doubt that it will ever be done "right" all the time.

As she mentions, one big aspect is how much you assume the reader knows. Most non-computer manuals, like assembling a bookcase, can safely assume that the reader at least knows what a screwdriver is. The problem with computers is that even people as young as 20 or 30 have never assimilated any computer knowledge. Just in the last few years have schools been teaching computers at all. After enough years go by the problem will dissipate, or at least drop to the level of those people who can't set the clock on their VCR—and the manuals for VCRs are pretty good now. The On Screen menus are easy, but apparently not easy enough for many people.

Here's my submission for your collection: The author who wrote, "At the following prompt enter an alphanumeric string." A programmer, of course, and he didn't understand why end users had trouble understanding that.

Brad Montroy

## The Write words

I just finished reading Esther Schindler's article on manual writing, which I found very interesting and which included some solid advice. However, it didn't address a key issue: many (most?) people just want to use the software without having to read about it (a good illustration of this is found in Leslie Lamport's LaTeX book, where Section 1.1 is titled: "How to Avoid Reading This Book"). This is probably exacerbated by the mouse-oriented current interface, where the user expects to be able to look at the icons and intuit what to do. I know that I am guilty of it: about a year ago I switched to Mesa2 from SuperCalc and have avoided actually sitting down and reading the manual. If I can't figure it out by staring at the icons, I'll look it up in the manual to find out which sub-sub-menu I should look at. Occasionally I'll actually read a section to get the philosophy of what's going on.

Clearly, a good index is essential. On-line tutorials are often helpful (although by the time I worked through Mesa2's I was thoroughly sick of cactus-farming), as well as organizing the manual so that the (non) reader can use it to get the information that he needs by reading short self-contained sections.

Richard G. Larson

## They like us. They really like us.

Keep up the good work. I need the moral support. I'm an APL user who's been hearing "APL is dead" for 15 years. That helps me realize how seriously I should take "OS/2 is dead"! But it still helps to see the good reasons for using OS/2 in extended attributes.

Curtis A Jones

## Gosh, thanks!

I've recently joined POSSI and I've really enjoyed the issues of extended attributes.

I've been reading Esther Schindler's articles ever since OS/2 Magazine and continue to appreciate her insight.

May the warpforce be with you!

Charlie Samour

## Welcome to Arizona. Now go home.

I just received the April issue of extended attributes. In the announcement of the program for the April 13 meeting you say, "...perhaps you should consider moving to Arizona...." Although it's a light-hearted jab, you should be careful with statements like these, as they may become a source of painful regret.

In California, the Architects Association is offering a sizeable "reward" for the person, persons, or organization that can come up with the most innovative plan to shoe-horn 10 million new residents into California's Greater Central Valley in the coming years. While, to put it mildly, such a plan could only be termed irresponsible, in my humble opinion it's just plain stupid. California is already overcrowded and ill-distributed. (People insist on living in areas such as Los Angeles lacking adequate water supplies, which requires sucking water from all over to maintain their swimming pools.) In addition, California's Central Valley is the most fertile and agriculturally diverse and productive land in the nation, possibly in the world. There ain't room for more people without destroying this.

I saw recently where some wag in Oregon has proposed official signs on all roads into that state in effect saying "Have a great time visiting beautiful Oregon. Please go home the way you came and have a safe journey."

While I have been fortunate enough to have visited Arizona only once or twice, I have come away both times impressed with the territory, and it would be a shame to see it destroyed by developers eagerly pursuing the all-powerful dollar. (OK, I do think I could do without the great numbers of homeless and shiftless persons frequenting the Phoenix downtown.) Maybe Arizona should consider Oregon's example.

Bill Chapman

# Nobody's talking

## Survey results on using speech recognition in OS/2

by Esther Schindler

Recently, IBM released the ViaVoice software developer's kit (SDK) for Linux, though there's still no native OS/2 ViaVoice in sight. This sparked a great deal of controversy in the OS/2 community, because—if nothing else—none of us want to feel abandoned.

However, the attitude expressed in many discussions seemed odd. It was as if OS/2 users were saying, "I don't use VoiceType personally, but IBM should update OS/2's speech recognition because I know it matters to a lot of other people." I'm always wary of assumptions, so I took upon myself to design a survey to find out more. As I did with the OS/2 demographic survey last year (see *extended attributes*, August 1998), I posted notice of the survey on Warpcast, newsgroups, and OS/2 related listservs.

Perhaps the most astonishing result was the volume of responses. In just one week, 1121 people answered the survey. Compare that to last summer's survey, when it took two weeks to get 520 responses. Speech recognition is undeniably a hot topic. 86% (951) respondents are not members of the Phoenix OS/2 Society (POSSI), so we also got a wide cross section. At least one IBMer distributed the survey notice to corporate customers, so they had the opportunity to respond as well.

### Who's using speech?

Despite the assumption by many OS/2 users that everyone else uses it, VoiceType is largely shelfware. Plenty of people tried it—52%, or 582 respondents—but have stopped using it. 19% (206) report that they use VoiceType sporadically, and just 7% (78) use it regularly. 22% (244) of OS/2 users never tried the feature, and 3 lone people checked the box, "There's speech recognition in OS/2?"

I should mention, here, that I stupidly left off an important category: those who tried to use VoiceType but could not, such as those who encountered hardware trouble. Those people categorized themselves as best they could, and the write-in responses (discussed later on) picked up their complaints.

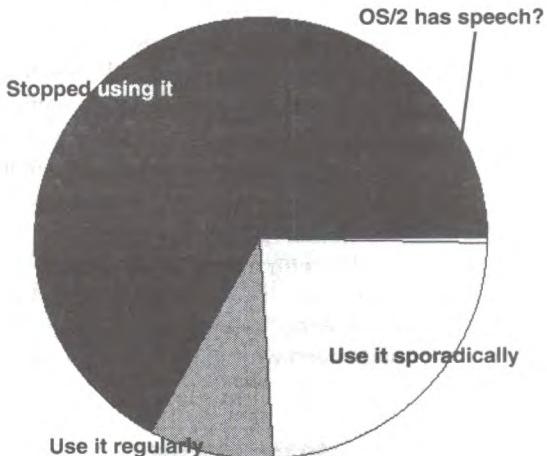
Table 1. When did you last use VoiceType?

In the last day	49	6%
In the last week	65	8%
In the last month	82	10%
In the last 3 months	97	11%
Longer than 3 months	547	64%
Never used it	17	2%

In any case, terms like "regularly" and "sporadically" are vague at best, so my next question asked when they'd last used VoiceType. Of the 857 people who use or used VoiceType, the breakdown was as reported in Table 1.

I didn't provide nearly enough options in my query about the reasons OS/2 users dropped VoiceType. Of the 672 people who had used it at one time, 52 (8%) said they hadn't dropped it, 167 (25%) didn't like its requirement for

### VoiceType is largely "shelfware"



discrete speech, and 180 (28%) felt it was awkward or difficult to use. 214 (32%) said that VoiceType wasn't accurate enough, and 103 (15%) "just drifted away from it." People could choose more than one answer, and 283 respondents also wrote in their own reasons. The top items were:

- My hardware wasn't up to it (41 responses—6%)
- The dictating paradigm didn't work for me/it's easier or faster to type (41–6%)
- I couldn't get it to work/hardware incompatibilities (32–5%)
- It's a system/resource hog (27–4%)
- It didn't support my language (well) (27–4%)
- I couldn't get training to work/it wouldn't recognize my words (21–3%)
- Ambient noise/it disturbed other people (18–3%)

So how good is it? Of the 844 people who have ever tried VoiceType, 28 (3%) are very satisfied, 340 (40%) are satisfied, 386 (46%) are dissatisfied, and 61 (7%) are very dissatisfied. (I'm assuming that the 29 who responded that they hadn't used it, in this question, were among those who couldn't get the software to work.) This is a little strange. People aren't disgusted with the application, yet they've stopped using it.

## Speech applications

Respondents were asked which speech aware applications they'd used. The 787 answers make it clear that:

- People are unaware these applications exist, or they don't think highly enough of them to try one, or
- OS/2 users don't understand the distinction between speech-aware (in which

speech recognition is an integral component of the program) and speech-enabled (in which VoiceType enhances an existing application).

Most of the 128 write-ins weren't speech-aware applications at all. Navigator and Describe don't qualify. I'm not sure of Papyrus' abilities—I've heard indications that they may be speech aware, though I've

never seen it personally—but 22 people wrote it in.

The most popular speech-aware application was VoicePilot (28 users, or 4%). Only 3 people had used Aviar's VTrex (under 1%) and 2 used Speech Advantage Medical.

In general, OS/2 users are familiar with the competition. Of 1095 responses, 165 (14%) had used ViaVoice, Dragon Dictate, or another VoiceType competitor. 157 (14%) had seen a demo. Most (396, 34%) are aware of other speech products in a general way, though 422 (36%) have no other experience with speech technology.

## What about OS/2 ViaVoice?

Those most fervent about their wish for an OS/2 ViaVoice would, accurately, point out that we OS/2 users have only the *old* technology. How many would buy a new, native OS/2 ViaVoice, and what would they be willing to pay? Tables 2 and 3 show the results.

I asked an open-ended question about how you'd use the hypothetical new version. Most people responded in general terms (dictation pulled way out in front of navigation), but a few gave specific examples. Email use wins out over dictating letters, but plenty of folks said their main use would be for unspecified word processing. Web browsing is also a popular wish-list item. Although speech recognition is most accepted in legal and medical circles, the demand for it in scientific reporting is nearly as high. Among the interesting uncommon responses were "to impress Windows users," "to enter data hands-free while I work," and "dictate/transcribe into other languages."

The responses make it clear that an OS/2 ViaVoice would appeal mostly to individual users. Of the 866 people who said they'd buy the software, 73% (630) said they'd buy one copy. 24% (205) said they'd purchase 2 or 3 copies, and only 9 people committed to buying 10 or more.

**Table 2. If IBM released ViaVoice for OS/2, how likely would you be to buy a copy?**

	All (1109 responses)	Those who've used it (859)		Use regularly or sporadically (284)	
Very likely	326 29%	292 34%		172 61%	
Likely	342 31%	283 33%		88 31%	
Unlikely	316 28%	227 26%		24 8%	
Extremely unlikely	125 11%	57 7%		0 0%	

**Table 3. What would you expect to pay for a single user version of ViaVoice for OS/2?**

	All (1105)	Have used it (860)		Use it (284)	
Under \$50	172 16%	142 17%		40 14%	
\$50-75	311 28%	264 31%		92 32%	
75-100	247 22%	203 23%		91 32%	
100-200	104 9%	88 10%		43 15%	
More than \$200	8 1%	7 1%		2 1%	
I'd buy it at any price	15 1%	13 2%		7 2%	
I don't know, or I wouldn't buy it	248 22%	143 17%		9 3%	
Mean (those with prices)	\$94	\$94		\$101	

**Table 4. Which of these describes you?**

	Overall (1114)	Use it (284)	POSSI members (156)
I'm a software developer	369	103	47
I'm a computer consultant, reseller, or solution provider	358	103	63
I use OS/2 as part of my job	535	147	86
I'm an IBM Business Partner, BESTeam member, and/or part of the IBM Solution Developer Program	86	25	14
I've written applications that use speech recognition	19	10	5
None of the above	327	71	47

## Who says so?

To better understand the people who use VoiceType, I asked several demographic questions. The data yielded some interesting side effects in reporting about the OS/2 community in general. In Table 4, respondents could pick more than one choice. Despite a proportionately high percentage of software developers (even in the active users category), few have attempted to write a speech application. This points to an IBM education failure among the development community. The news is also poor for IBM's various developer and reseller programs. Even if you assumed a maximum overlap in categories (that, say, every programmer was also a system integrator), which isn't so, only 86 (23%)—at best—of those who could qualify, bother to belong to one of the programs.

What of the 19 developers who have written applications for speech? 18 of them are OS/2 home users, 12 work in small businesses, 3 work for IBM, and just 5 of them are corporate employees. (We can probably assume that the 3 IBMers account for 3 of the 5 corporate check-marks.) Only 10 of them use VoiceType (3 regularly, 7 sporadically), indicating that the technology has become shelfware for them, too. They're especially willing to buy an OS/2 ViaVoice (10 said "extremely likely") and are willing to pay more for it—an average of \$128. Only 8 are members of an IBM developer

or reseller program. In short: IBM's not reaching speech developers, certainly with its focus only on large shops.

## What "corporate focus"?

An even more interesting statistic is the 535 of us who report they use OS/2 as part of their jobs. That's 48%, folks—a much higher percentage than I expected and surely higher than IBM would predict—especially when you factor in data in Tables 5 and 6. 392 of the respondents use OS/2 only at home. Those who use it at work are extremely likely to use it at home, too—86%, overall. This doesn't match IBM's oft-repeated statements that they're targeting OS/2 only for large corporations... either that, or they're failing miserably at achieving that goal.

## What does it all mean?

I've filled up several pages of charts and graphs, but I feel as if I barely got started. However, I think I can come to a few hard conclusions based on the data I've presented here:

- OS/2 is used in many more small businesses than IBM may feel comfortable admitting. Of the people who use OS/2 on the job, 63% are in businesses with under 100 employees. 24% work in companies with over 500 employees, and 21% have 1000 employees or more. I trust that about 20% number for corpo-

rate use (500+ employees) even more, because it matches the data I collected last summer. (Though, of course, ATM machines and servers don't generally answer Web-based surveys or use speech! Self-selection does play a part.)

- VoiceType on OS/2 is shelfware. Users are interested in its possibilities, enough to be willing to give it a shot if a new version comes out, but its market is primarily individuals—just the market from which IBM has been trying to disassociate itself. That doesn't seem to imply that we'll see such a product anytime soon.
- IBM hasn't adequately communicated the benefits of writing or using speech applications to either developers or users. This seems to be part of a larger problem in attracting people to its support programs, particularly when the prospective members are from smaller companies.

Table 5. I use OS/2 as a...

	Overall (1117)	Use OS/2 on the job (535)	(Very) Likely to buy OS/2 Via-Voice
home user	1006	464	604
small business user	491	324	347
medium-sized business user	74	60	47
corporate/government user	178	143	108
IBM employee/contractor	44	38	26
I don't use OS/2 at this time	11	0	3
Average number of responses	1.62	1.92	1.71



Do you see any other conclusions I've missed? Write in, and tell me about it. ☺

Esther Schindler's first career was in market research. Even though she's technology editor at *Sm@rt Reseller* these days, she loves playing with the numbers.

Table 6. Company size (whether or not OS/2 is used there)

	Overall (1089)		Use OS/2 on the job (531)	
1	197	18%	93	18%
2-3	138	13%	77	15%
4-9	97	9%	56	11%
10-24	88	8%	51	10%
25-49	53	5%	25	5%
50-99	61	6%	33	6%
100-499	129	12%	56	11%
500-999	44	4%	20	4%
1000+	195	18%	109	21%
not currently employed	87	7%	11	2%

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# Tyra/2 for the tyro

## Simplified CONFIG.SYS editing

by Jeff Shultz

Review

Some software you're immediately satisfied with. Other applications disappoint you. The third sort of software just sort of grows on you as you discover its usefulness. For me, Tyra/2 1.40 fits in category three.

Tyra/2 is a utility that makes it easier to change or add a setting in your CONFIG.SYS file, and it also functions as a CONFIG.SYS manager. I downloaded it because I was tired of messing with my CONFIG.SYS file using the System Editor. But I wondered if it could really be worth the \$49 registration price. After all, this is only a single function utility. I bought the entire Lotus Smartsuite/2 for less than three times the cost of Tyra/2. However, after making 45 CONFIG.SYS changes since February, I've grown attached to Tyra/2. It's greatly simplified my hacking of the CONFIG.SYS file.

### Managing CONFIG.SYS

Tyra/2's tabbed notebook style of interface will be familiar to anyone who's used a file properties notebook in OS/2.

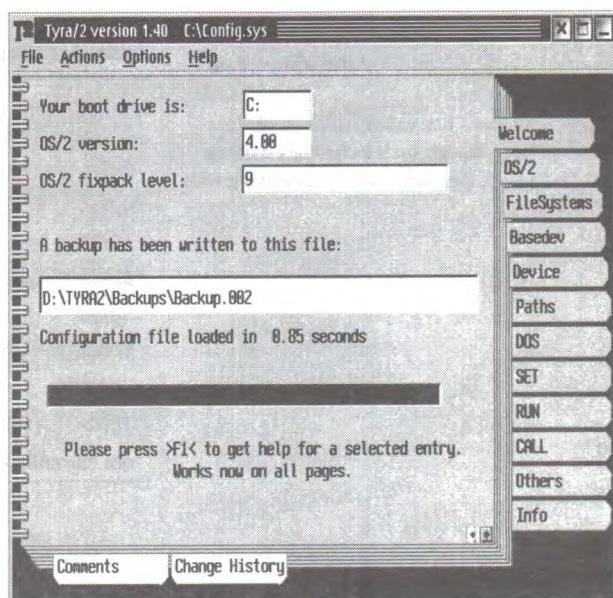
The Welcome tab includes some system information, such as the boot drive, OS/2 version, and your fixpack level, plus the name of the backup file that Tyra/2 automatically creates. The OS/2 tab has pages covering OS-specific items, from printers to SOM and VoiceType. Under the File Systems tab, each filesystem enabled has its own page containing the myriad settings that the IFS= line can manage. The Basedev section lists all the BASEDEV= statements. Their parameters are displayed in a separate viewing window at the bottom when you click on the statement. A Device tab is similar to Basedev, but for Device drivers, such as your video card and SIO. Paths is like FileSystems; each path line (like Libpath, Path, and Dpath) has its own page.

The DOS section of Tyra/2 contains four pages of DOS settings. Many of them only require a checkbox to enable, and they include several settings I didn't even know

existed. Set, Call, and Run pages are all set up like the BaseDev and Device pages, and an extra Others page lets you add lines that don't fit under the structure above. That includes REM lines that didn't fit on another page, such as "REM \*\*\* IBM Voicetype \*\*\*." Info allows you to view information on

your hardware devices; the output appears to be gathered using RMVIEW.

On the Basedev style pages, you have several options that you can apply to any statement. They include "Promote," to move an item higher on the list (and presumably boot order), "Demote," to do the opposite of promote, "New," to add statements of that type, "Delete," which



should be obvious, either "REM out" or "UnREM" depending on the state of the highlighted statement, and "Show Info." Show Info displays any information that Tyra/2 has in its database on that particular driver, as well as the date and size of the driver. You can also use that selection to change the driver, using the file browser. New to version 1.40 is an Analyze function that goes through the CONFIG.SYS file and finds lines that are no longer correct. Since I didn't have my OS/2 Warp CD-ROM in the drive, it noted that the line SET LANINSTEP=H:\CID\IMG\IBMPEER doesn't point at a valid directory. "Check Paths" performs a similar function on path statements, telling me that C:\ doesn't contain any DLLs or executables, and that there are no help files in SET Help: C:\BonusPak\askpsp\books.

The Settings notebook allows you to change the program's colors and fonts. You can also select whether the change history should be added to the CONFIG.SYS. An option also lets you change the sort order of the CONFIG.SYS file by sections; this option has a warning—in red letters—about being careful lest you render your machine unbootable.

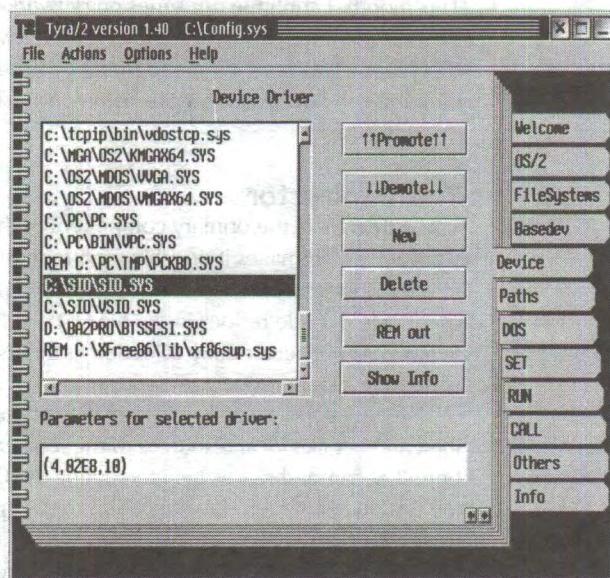
### And at this price!

Early in this review I groused about the price of Tyra/2 being a little high. Fortunately, a little research showed that my complaints weren't entirely justified. The \$49 license fee registers you for all future versions of Tyra/2, and you can also get a "single version" license for \$19. Volume prices are also available.

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tyra2@gmx.net  
[www.online.de/home/os2](http://www.online.de/home/os2)

If the thought of going through the CONFIG.SYS file armed with only a text editor is daunting, or you are simply tired of facing several disorganized pages of statements and parameters in that same text editor, give Tyra/2 a try. It's available at [www.bmtmicro.com/catalog/tyra2.html](http://www.bmtmicro.com/catalog/tyra2.html) and [www.online.de/home/os2](http://www.online.de/home/os2), where the author also maintains the Config.sys Documentation Project.

One last note—Tyra/2 requires the latest version of the VX-REXX runtime DLL, VROBJ.DLL version 2.1D. I only had version 2.1C when I first downloaded Tyra/2, and the program complained loudly when I launched it the first time. You can download Tyra/2 with or without the DLL included in the zipfile. ☺



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# Warped networks

David Both  
. and Warped

This month, I continue our series on networking with a little more detail of how OS/2 implements networking, and topologies. This time, I'll spend most of the column on defining network terms that are commonly used, but often misunderstood.

## The Redirector

The redirector is the primary component of the network software which makes it possible for a requester workstation to use resources shared on a server or a peer server. This piece of code resides in the file NETWKSTA.200 in Warp. This redirector code is loaded as an installable file system (IFS) in the CONFIG.SYS file.

The redirector's function is to make network resources look and act like local resources to the requester workstation. It accomplishes this by intercepting the OS/2 kernel file system calls and redirecting them to the appropriate network resource.

Since printer data streams are handled through the file system, they can be redirected using the redirector. This is how printing to a network printer is handled.

## Protocol drivers and MAC drivers

Two software components are necessary to implement network communications. Network adapter drivers, also called MAC drivers, are the physical device drivers required to operate the NIC (Network Interface Card) hardware. The acronym MAC stands for Media Access Control and refers to the OSI media access layer.

The protocol drivers (for NETBIOS, TCP/IP and so on) enable the communication between an application and the network adapter driver. The Network Driver Interface Specification (NDIS) provides a standard means of communication between network adapter drivers and protocol drivers.

MPTS (MultiProtocol Transport Services) allows all versions of OS/2 Warp to support multiple protocol drivers. This support for multiple protocols is one of the features which makes Warp such a powerful network client. It allows connection to a NETBIOS network, the Internet (which uses TCP/IP), and a NetWare network using IPX/SPX, all at the same time, with only one network adapter.

Drivers are bound to each other and to the adapter under direction of the statements in the PROTOCOL.INI file.

The term *network topology* refers to the physical layout of your network. It has also come to be synonymous with the two primary network transport layer types, Token Ring and Ethernet.

## Transport layers

In a Token Ring network, the logical topology is a ring. Data is transmitted around the ring on a data packet called a token. There is only one token active on the ring at a time. A computer can only transmit data on the ring when it receives an empty token. When it does, it places data in the token and adds the address of the target system to the token header and sends it out on the ring. Each computer on the ring receives the token in turn and determines whether the token is for it. If not, the computer sends the token to the next computer in the ring. When the target computer receives the token, it strips the data from the token for processing and sends the empty token back out on the ring for use by another computer.

The nature of the Token Ring environment prevents collisions between packets of data, as can occur on an Ethernet network. As a result, data throughput on a Token Ring network scales up in a very linear manner to the full rated speed of 4 or 16 Mb per second.

Because the physical layout of the Token Ring wiring usually takes the cable from each computer back to a wiring closet for security and ease of administration, this type of network is physically laid out as a star. However, it still works as a ring.

Wiring in a Token Ring network is usually done by connecting each workstation into the network through a centrally located device called a MAU (Multistation Access Unit). Each computer is connected to the MAU by a single cable, which contains both the inbound wires from and the outbound wires to the ring. This changes the physical topology into a star configuration while leaving the logical ring topology. The advantage of this is that it is easier to locate and correct problems on the ring.

The topology of an Ethernet network is a simple line. Each computer is connected to a simple wire segment. In this environment a single wire runs from the server to each computer in turn.

Hubs can be added to an Ethernet network to improve overall throughput. In this type of installation, each computer is connected to a port on the hub and thus has a single 10 Mb segment all to itself.

Data packets are broadcast from a sending computer and all computers see the packet. Each receiving computer checks the packet address to see whether the packet is for it. The target computer then uses the data in the packet and all the other computers discard the packet.

Multiple computers can broadcast packets at the same time resulting in a collision. When collisions are detected each computer waits a random amount of time before

continued on page 13

# Seat belts required

By Esther Schindler

by Esther Schindler

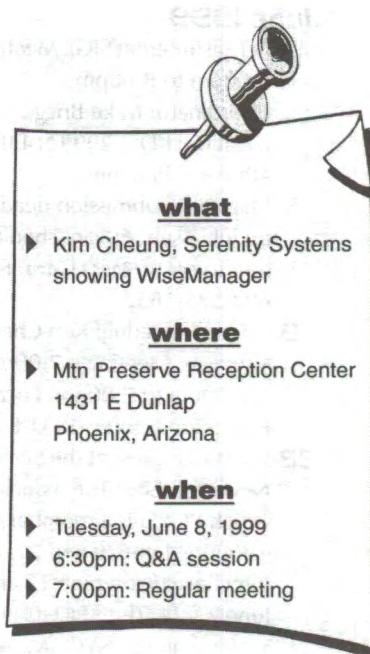
We're a little nervous about the Phoenix OS/2 Society's general meeting, scheduled for Tuesday, June 8. Kim Cheung, Executive Director of Serenity Systems, will show us WiseManager, a product that delivers to small and medium size companies the same benefits that IBM has been providing to their enterprise accounts through the WorkSpace On Demand product. But we'd like to avoid a repetition of what happened at the recent Southern California OS/2 User Group meeting, when Kim Cheung demonstrated the WiseManager product. Their newsletter's report begins, "SCOUG members were seen falling out of their chairs in amazement..." and concludes, "WiseManager is truly a miracle." That's a little overwhelming.

What kind of product can generate such a response? How about a product which allows anyone to build a TCP/IP intranet, by filling in the blanks? Ever hear of a product which can deploy an application across a WAN with one drag and drop—over a switched connection, from a remote site? Or how about building an OS/2 machine in 30 seconds or less?

According to Cheung, business partners have said, "If you want to make your product valuable, make it simple and complete." At the June general meeting, you'll watch how simple it is to build an OS/2 machine on the LAN. Power on the machine, type in a name and—poof!—a complete OS/2 Warp 4 machine is ready.

With WiseManager, you get more benefits, more function, and less cost in an "out of the box" solution that works. WiseManager provides solutions for software deployment, application and user management, problem resolution, all accomplished using OS/2's solid and proven technology.

Although WiseManager can coexist with IBM's WorkSpace On Demand, WSOD is not required for WiseManager to operate. All you need is OS/2 Warp Server Entry, OS/2 Warp Server Advanced, or OS/2 Warp Server SMP.



Kim recently completed testing on Aurora and IBM's new Network Station hardware. At this meeting, you'll hear his assessment of how these new products from IBM can improve your experience with "Network Computing—for the rest of us."

## When and where

The general meeting will be held on Tuesday, June 8, at 7:00pm, at the Mountain Preserve Reception Center, 1431 E Dunlap. The "random access" Q&A session starts promptly, on the dot, at 6:30pm, give or take a half hour.

Kim is a dynamic presenter who's sure to reinvigorate your enthusiasm in OS/2—so plan to reconvene after the meeting at Coyote Springs. ☺

# Coming events

History

A list of events scheduled by the Phoenix OS/2 Society and other OS/2 user groups.

## June 1999

- 1** net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- 5** Magazine submission deadline for July issue. Articles should be sent to [editor@possi.org](mailto:editor@possi.org). For other arrangements, call 602-585-5852.
- 8** General meeting; Kim Cheung, showing Wise Manager. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.
- 22** Want to represent the Society at a user group event in New York City? The Association of PC User Groups, of which POSSI is a member, is holding a regional gathering June 20 and 21, following NYPC's InterGalactic on June 19 and just before PC Expo on June 22-24. The APCUG event will be held at the New Yorker hotel in NYC. (More information is available at [www.apcug.org/events/pcexpo/spring99.htm](http://www.apcug.org/events/pcexpo/spring99.htm).) To represent POSSI, it's not a requirement that you have an official role in running the user group. However, if you're interested in attending, the board would like to bless your participation. Drop an email to [president@possi.org](mailto:president@possi.org), and Dick will talk to you about specifics.
- 26** Board meeting and magazine prep. Meeting is 10:00am to 1:00pm. Eat a brunch, learn about the inner workings of the Society, and help get extended attributes ready to mail. Location: Bill and Esther Schindler's house in north Scottsdale, 9355 E Mark Lane. Call 602-585-5852 or send email to [esther@bitranch.com](mailto:esther@bitranch.com) for directions.

## July 1999

- 6** net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- 5** Magazine submission deadline for August issue. Articles should be sent to [editor@possi.org](mailto:editor@possi.org). For other arrangements, call 602-585-5852.
- 13** General meeting; OS/2 in small business. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to

June						
S	M	T	W	T	F	S
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27	28	29	30			

7:00pm. Location: Lumature, Scottsdale Road (north of Greenway), Scottsdale.

- 24** Board meeting and magazine prep.

## August 1999

- 3** net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- 5** Magazine submission deadline for September issue. Articles should be sent to [editor@possi.org](mailto:editor@possi.org). For other arrangements, call 602-585-5852.
- 7** FOOBAR (Friends Of OS/2 Barbeque And Revelry), celebrating POSSI's 5th anniversary. Location: Robert "Rosey" Rosenwald's house. Details to follow.
- 28** Board meeting and magazine prep.

## August

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15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

## September 1999

- 5** Magazine submission deadline for October issue. Articles should be sent to [editor@possi.org](mailto:editor@possi.org). For other arrangements, call 602-585-5852.
- 7** net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- 14** General meeting; iTool, a Web-based application to create your own e-commerce site. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.
- 25** Board meeting and magazine prep.

## September

S	M	T	W	T	F	S
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## October 1999

- 5** net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- 5** Magazine submission deadline for November issue. Articles should be sent to [editor@possi.org](mailto:editor@possi.org). For other arrangements, call 602-585-5852.
- 12** General meeting. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.

## October

S	M	T	W	T	F	S
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# Meeting locations

Directions to meeting locations.

General meetings are held at the Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.

From the Black Canyon, exit at Dunlap and head east. From the Squaw Peak, exit at Northern. Go west to 12th Street, turn right, go north to Dunlap, turn right, and it's two blocks up on the right.

The "How OS/2 Works General Interest Group" and the Internet SIG (net.sig) meet at Knowledge Development Center, 2999 N 44th St, Suite 400. That's just north of Thomas, in the building with the green dome. Plenty of free parking is available in the garage behind the building. ☺

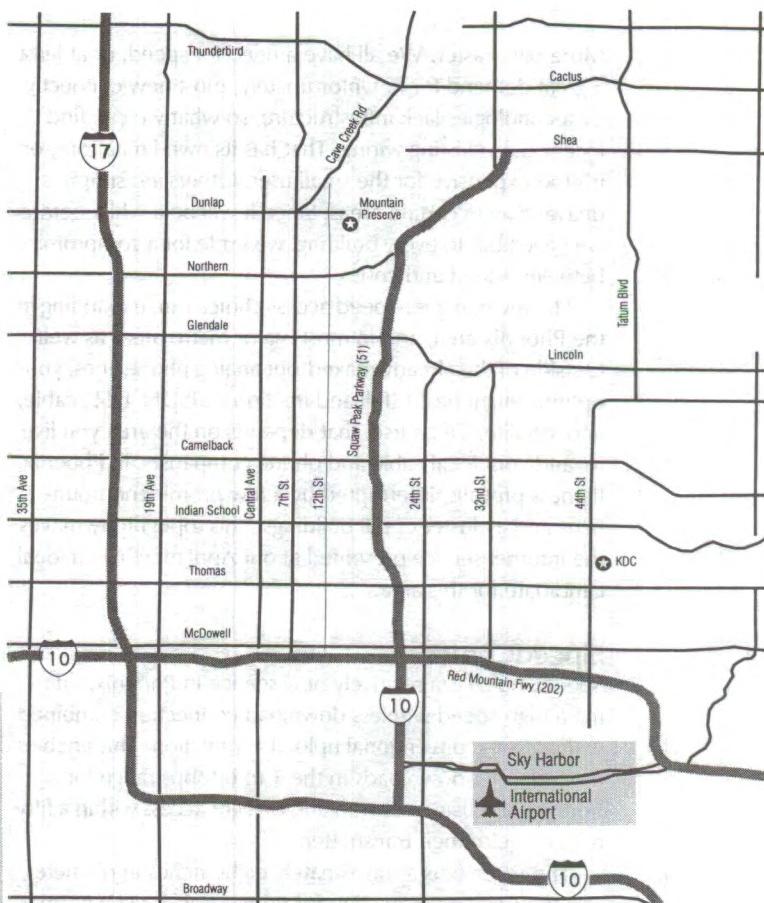
If the mailing label on the back cover says "sample" then this may be the only copy of extended attributes that you will ever receive. If you want to keep getting the magazine (and receive all the other benefits of membership), you must join! A 12 month membership in the USA is only \$30. (See the form for membership pricing in other areas.) Tear out the application, fill it in, and mail it with your membership fee today!

continued from page 10

rebroadcasting its packet. Large numbers of collisions on large Ethernet networks can reduce the total throughput significantly. In fact, throughput falls off significantly at about 20% of an Ethernet network's rated speed with large numbers of clients. This means that a 10 Mb/S Ethernet is really only capable of about 2 Mb/S due to collisions, and a 100 Mb/S Ethernet is only capable of about 20 Mb/S maximum sustained throughput. Peak throughput can be significantly higher, however.

Next month I will discuss network services and how they work. ☺

David Both can be reached at [dboth@millennium-technology.com](mailto:dboth@millennium-technology.com).



# Coming to a mountaintop near you

by Joel Frey

More bits. Faster. We all have a need for speed, or at least a great demand for it. Unfortunately, most new connectivity technologies lack infrastructure, so what we can find locally uses existing wiring. That has its own limitations, or it's too expensive for the small user. Others are simply unavailable in certain areas. Since it will be a while before we have fiber to every building, we settle for a compromise between speed and cost.

However, higher-speed access choices are expanding in the Phoenix area, and in most major metro areas as well. Outside of the already maxed-out analog phone lines, your options might be T1 (full and fractional), ISDN, DSL, cable, and satellite. Of course, that depends on the area you live in, and your local cable and phone companies. In Phoenix, flatness prevails, interrupted by a few prominent mountains and a cluster of tall buildings. This topography makes the Internet service presented at our April meeting an ideal candidate for this area.

## SpeedChoice

SpeedChoice is a relatively new service in Phoenix, offering a high-speed wireless download connection combined with a more conventional upload connection. This enables them to offer downloads in the 1 to 6 Mbps range for homes and businesses with line-of-sight access within a fifty mile range of their transmitter.

The receiver is approximately eight inches in diameter, and the upload connection for home users is via a normal telco/modem link. The wireless connection will soon be bi-directional, perhaps by the time you read this. For commercial users, the upload can use any of the conventional high-bandwidth connections, like T1, ISDN, or whatever else is available. Although SpeedChoice can serve as an ISP, they can also serve as a link to your existing ISP.

Due to a scheduling mixup, the folks at SpeedChoice asked David Korb to give this presentation at the last minute. He did an admirable job. Formerly employed by SpeedChoice, he now has his own telecommunications consulting service that includes deploying the SpeedChoice service for commercial users. He was able to offer several first hand and detailed examples that demonstrated how wireless service was integrated into various applications. For instance, he described how a hospital could transmit large X-Ray image files (in the range of 40-70 MB) to doctors' homes when they were on call, when transmission speed was a critical issue.

Although currently only available in the Phoenix and Detroit areas, SpeedChoice has licensing in eleven major markets. As David noted, making Phoenix their second

market "was a no-brainer, due to the topography." The company started as a wireless cable company named Peoples' Choice, but switched to a digital service under pressure from investors. SpeedChoice is the wireless Internet service arm of Peoples Choice, and Peoples Choice offers other wireless data services.

## How does it work?

SpeedChoice uses a technology called MMDS, for Multi-channel Multi-point Distribution Service. Installation involves mounting the receiver on the roof and running coax down to a cable modem which is connected to a network card. A multiport cable modem can be used when multiple IP addresses are needed. Installation costs \$150 and the service is \$40/month.

When the bidirectional service becomes available, they will replace the receivers with a receiver and transmitter, although the upload speeds will be at 33.6, 128, or 256k, depending on price. Although this will increase the cost, it might eliminate the need for a separate phone line or other upstream connection. There will be no charge for the changeover, except for the increased cost of the service, which is planned to be competitive with cable and DSL internet services. Commercial customers with a faster upstream requirement will have to continue to use a separate connection.

This service has a couple of other advantages. One issue is security. Since you're not on a hard-wired network with this service as you are with a cable modem, you are less prone to unauthorized access. With DSL, you also need an ISP that supports DSL. David mentioned, however, that they sometimes have problems siting their receivers, due to restrictions imposed by CCRs and homeowners' associations in many housing developments.

As I mentioned earlier, the only obstacles to line-of-sight access to their original transmitter are a few prominent mountains and a cluster of tall buildings. I don't access the Web much from home these days, so my 56K modem hasn't reached the critical annoyance stage. Yet.

Unfortunately for me, if I decided to use this service, that cluster of buildings is right between my house and the SpeedChoice transmitter on Phoenix' South Mountain. They have a second transmitter on a mountain farther north, at Shaw Butte, so I might still be in the running. However, I also have cable Internet service in my area at a competitive cost and either service would enable me to get rid of my second phone line. Interestingly, David pointed out that in the X-Ray transmission mentioned earlier, the users that didn't have good transmitter access, were fortu-

nate to have cable modem service available, and vice versa.

When the 3Com folks were here a while back, one of them mentioned that he lived in Silicon Valley and couldn't get cable internet service yet. Although neither the

cable company or SpeedChoice has complete coverage of this area yet, I guess we're fortunate to have alternatives at a competitive cost. They may be coming to a mountaintop near you.

For more information check out [www.speedchoice.com](http://www.speedchoice.com).

## Driver poll results

by Detlef Schäbel

IBM Germany wanted to protect the investment of seventeen big OS/2 customers, so they asked them for input on their OS/2 driver requirements over the next 18 months. When TeamOS/2 Deutschland eV received a note about this poll, we started asking all OS/2 users, even the private ones, about their needs. Private users have different necessities; unlike many corporations, they will use state-of-the-art hardware like USB, 3D graphic cards, and modern printers.

We (TeamOS/2 Deutschland eV) installed a Web page and a special E-Mail address to which users can send their wishes. After just only one week, over 36.000 mails with driver wishes were sent. After we collated them, the results were transmitted to the division in IBM Germany which had queried the seventeen big OS/2 companies.

The top five driver wishes are graphic cards (25,512 requests), sound cards (15,865), DVD ROM/RAM/RW (13,939), printer (13,443) and USB (6,531). The detailed results can be found at [www.teamdv.de/statistik2.html](http://www.teamdv.de/statistik2.html).

Small, medium, and big business customers used our poll to show their demands. One unnamed IBM employee told us that there is no transparent structure within IBM to address such issues internally.

IBM was impressed by this overwhelming result, but made no official statement. They did promise us to send the results to the IBM laboratories in Austin.

This poll shows us that OS/2 is still alive, and IBM should no longer ignore its biggest customer: the private one. We'll show that OS/2 is still alive and that it is worth to protect the private user's investment, too. The OS/2 community can be sure that this is not the last poll from TeamOS/2 Deutschland eV!

# Driver watch

## New support for your OS/2 hardware

by David Wei, [davidwei@cybermail.net](mailto:davidwei@cybermail.net)

Driver watch

[Editor's Note: Few of us have the time to keep an eye on vendor Web sites or IBM's device driver site, on the chance that they've released new support for our hardware. David Wei has graciously agreed to write a column in which he reports on the latest and greatest. If you come across driver news, won't you send it his way?]

### Audio-CD-Creator V0.3ib

This front end for CDRecord/2 should help you produce Audio CDs with ease and simplicity. As I do not have a CD-R drive, I could not test it myself. If you do, check it out at [www.geocities.com/SiliconValley/Sector/5785](http://www.geocities.com/SiliconValley/Sector/5785).

### IndOS2 Project: PMCDrec V

The PMCDrec V 0.01beta is another CDRecord/2 front end. However, instead of creating only Audio CDs, this program should also help you produce data CDs. Since it's program is in its early stage of development, it still has several features to be added, but the "To Do" list looks very exciting:

- file mounting via TVFS
- automatic SCSI detection
- show status
- information about CDs
- burn options before burning
- show burn volume
- burn via pipes

For more details, go to <http://en.os2.org/projects/indos2>.

### IBM updated OMNI driver

IBM's jack-of-all-trades printer driver has been updated, as of April 5, 1999, with added support for Canon BJC-2000, 6000, HP DeskJet 420, 672, 695, 697, 895 and Epson Stylus Color 640. You'll find it at <ftp://ftp.software.ibm.com/ps/products/os2ddpk/omni.exe> for direct download from IBM.

### LaserJet and PCL 5 printer driver

IBM updated the HP LaserJet driver to version 30.682 (April 1 '99), and updated the PCL5 driver to version 2.544 (March 23 '99). They can be downloaded from <ftp://ftp.software.ibm.com/ps/products/os2/os2ddpk/laserjet.exe> and <ftp://ftp.software.ibm.com/ps/products/os2/os2ddpk/ibmpc15.exe>.

### Lexmark's new printer

Lexmark will soon release its new Z51 ink jet printer. It's claimed to be one of the fastest printers around, with black and white speed up to 10ppm and color speed up to 5ppm. With speed like that, it can put some laser printers to shame. More importantly, it's expected to have the same excellent OS/2 driver support that we have come to expect from Lexmark.

### USB Storage Device Driver

As my first driver programming project, I'm considering a USB Storage device driver. I hope this will be a 100% open source project. As I'm a complete newbie in the device driver programming field, I need all the help I can get. If you are willing to help (or better yet, program the driver), please let me know. I'll set up a Web page about it at [www.pcenduser.com/USB](http://www.pcenduser.com/USB).

The USB storage devices I hope to support are, sorted in the order of importance: Compact Flash/Smart Media reader, USB CD-ROM, and USB LS-120/ZIP/other disk media.

### TNT/TNT2 Driver

Rumors? News? What? After saying no to OS/2 for a long time, nVidia seems to have decided to provide an OS/2 driver of some sort. Details are unclear, and nVidia is not making the driver public yet. We'll let you know as soon as there's a public release. ☺



# HTML For The World Wide Web

Review

by Tim Cook, Reprinted from the September, 1997 Issue of The Central Iowa Computer User

For those of you just skimming this article, I'll skip to the bottom line. Get this book.

This book is a must for everyone that has a web page or anyone who would like to have a web page some day. It carefully and clearly explains the elements of HTML (Hypertext Markup Language) in a manner that's easy to understand and easy to use. In order to make your web page truly your own it is important that you understand the capabilities of the elements you are using in your web browser as well as others that are being used. This book does that. It tells you what to expect using Netscape and what to expect using Microsoft's Internet Explorer, the two most popular browsers being used today. (Per Microsoft at our last meeting it's about 60% and 30% respectively). It even reminds you to keep the text browsers in mind. Did you know that the blind use text browsers in which the program "reads" the text to the user? It's something to consider in making your web page accessible to the most number of people. On the other hand, if you direct your page primarily to Netscape users, you have more advanced features available to you and hope the other browsers will catch up on their capabilities. Using both major browsers to view your page is a must to know how your page will appear.

The book starts off simple and eases into the more sophisticated in a way that is hardly noticeable. It gives plenty of examples so you can use what you've learned right away. It even talks about programs and features that are not part of HTML but help you to give your page a more sophisticated look. For example, there is a whole chapter devoted to graphic preparation in the gif and jpeg format. It gives step by step examples on how to prepare a graphic using Photoshop. If you don't have Photoshop, you should be able to adapt the information to your graphics

program, since most graphics program try to have many of the same features of Photoshop. There is even a section on animated gifs. Which requires a special program I don't have but I plan on using in the near future. It also explains how to use tiled backgrounds. I tried this feature with great results. I was able to place a watermark on my resume to give it a more professional look ([www.radiks.net/timc/resume.htm](http://www.radiks.net/timc/resume.htm)). This watermark automatically repeats itself throughout the page so you only have to set it up once. There is another chapter devoted to using your graphics effectively using html commands. It explains the problems involved, the limitations, and the solutions. This gives you a great amount of control over the

look of your site in combining graphics and text in a way that is just how you want it. And all that only takes us through Chapter 4.

There is an extensive chapter on understanding links and anchors. The heart of any web page. It explains the benefits and drawbacks of relative links vs absolute links. For example my resume is listed on Yahoo. I discovered that some of my links didn't work using relative addresses but work fine with absolute links. Absolute links eliminate the worry of where your page is, and where your links are. It also can save on memory. I use a CIACUG logo graphic on one of my pages, but I only need to refer to it on our CIACUG page in order to display it on my page.

It also covers tables thoroughly. Tables were created by left brained people to display numbers, but the right brained people figured out how to do all sorts of creative things with them. The Shareware page on the CIACUG site (<http://george.ecity.net/~ciacug>) is a good example of the creative use of tables to present textual information in an interesting manner. Tables can also be creatively used to make selection buttons, designs, and text layout. There is a chapter on frames. Frames have become very popular in their use, and now you can add frames to your page just like the big boys do.

The chapter on Multimedia covers sound and video. I tried the use of sound to personalize my page. I use a space motif, so I added space age sounds to the beginning. I also added a welcome message. Since the welcome message ended up being a 300KB file, I decided to include it as an option. Otherwise it would take way too long to load my page. The message is a little corny, but since I recorded it myself I had great fun doing it.

My favorite was learning how to create an image map. Using the home page concept, I set up an image of a house on my page with different rooms taking the visitor to different places. I still kept the menu for those who prefer it and for items that didn't fit the house concept. I was pleased with the results. You can view it at [www.radiks.net/timc](http://www.radiks.net/timc).

There is a section on colors that is very helpful. It explains how to get the exact color you want and even has samples of various colors along with their codes for you to use.

Since HTML and JavaScript are both written in ASCII, it doesn't really take up much room on my site, but instead utilizes the resources that are already resident on the viewer's computer.

Congratulations to Elizabeth Castro and the people at Peachpit Press for putting together a very readable, understandable, and affordable book.

**HTML For the World Wide Web Visual Quickstart Guide**  
by Elizabeth Castro  
\$17.00

PeachPit Press  
2414 Sixth St  
Berkeley, CA 94710  
[www.peachpit.com](http://www.peachpit.com)

# Refinement, from the lab to commercialization

by John Wubbel

Last month, I discussed the topic of refinement as it applies to design and development. Refinement also plays a role in the research and theoretical arena.

Those of us using object-oriented analysis and design often take refinement for granted. The longer you work in the IT industry, the better appreciation you have for understanding how we arrived where we are today. The computer science field, and the information age, when compared in a historic perspective with other fields, is very young, particularly when you look at the accomplishments. One example is the short time period it took Donald Knuth to produce his famous master works in three volumes, *The Art of Computer Programming*. The pace probably will keep accelerating as more people have access to more computing power.

## A trip into the wayback machine

For example, in the early 1970s a typical professional programmer would find himself or herself in a mainframe business environment. Personnel included key punch and computer operators, programmers and senior analysts.

A systems analyst might work on program design, flow charting and specifications for programmers. Hands-on machine experience was not like we know it today, because jobs ran at scheduled times or alongside other programs controlled by a supervisor program. Programmers wrote code on forms. Code was given to the key punch operators whose job it was to transfer the information from the form to a card. The stack of cards would be read by a machine in preparation for running the program. If it did not abend, the programmer might receive appropriate output such as a stack of invoices or work orders. Data or I/O intensive applications ran in batch mode. If the program failed the programmer would receive a core dump for debug and analysis.

The PC was introduced by 1981. You could almost believe it was within our means to achieve more in a shorter time span because the masses could now get direct computer access unlike a mainframe. In the 1980s, academics in university and research labs were developing the ideas of moving from the procedural languages to the concepts contained in the object oriented paradigm.

What lay at the heart of the problem motivating a change in thinking from the procedural to OO? The spirit or essence of addressing a problem in computer science was known as a pending software crisis. A tractable problem of how to design and create large systems. Applications such as air traffic control or real-time on-line transaction systems for financial institutions. There were short comings

in the languages, lack of design methodologies and development of business processes encountered when proposing a large system. This was evidence pointing toward a crisis.

The first Modula 2 compiler, available for the PC around 1985, gave a wider audience of PC programmers the ability to write code and test theoretical ideas published in journals such as data abstraction. Several things had to happen before anyone could capitalize on this technology. The PC had to become more powerful, compilers had to evolve, and the complement of leading researchers had to come together on standards. Moving from the theory stages into commercial usage required advances in compilers and a consensus within the IT community on exactly which language was suitable for a particular paradigm. Perhaps even new languages had to be developed to move from theory to implementation. (Of course, C++ and Smalltalk are dominant in many of today's large system projects.)

## The historical view

There are two ways to get a historical view. First, you can spend time in a good university engineering library and read the progression of articles, papers and journals published during that evolutionary period of the object model. Back then, it almost seemed like none of the research would make it out of the lab in our lifetime, while arguments raged and results were verified by various peer groups.

The second way to gain a historical view is to look at the key milestone books published. In my personal library, I have such books by C. J. Date for the database, Kernighan & Richie, Stroustrup and Booch, to name a few. As research reached a level for commercialization, competing authors favored various approaches or methodologies. So, they preach why their methodology is the best.

My all time favorite book, written by Harlan D. Mills, was a text titled *Principles of Information Systems Analysis and Design*. When all the object oriented books started hitting the book store shelves, I could not figure out whose approach was the most appropriate for my type of work. I also could not fathom why Mills was so totally ignored. Mills was the first researcher and professor that made sense to me, whose box structured system was mathematically proven. I was not totally sold on the array of object oriented analysis and design approaches in publication at the time.

Then I began to look at my book collection from a different angle. Having scoured the libraries for all the pub-

lished articles by Mills and his associates, I was aware of examples he developed to demonstrate his system. The most memorable example was the weather buoy station. While I was reading the book by Grady Booch, *Object-Oriented Analysis and Design with Application*, I found the same Mill's example in his book. I about fell out of my chair. At this point, I began to pay more attention to the bibliography references. Sure enough, Booch credited Mills, to my satisfaction. Though, skeptic that I am, I wonder if this was some scheme by Booch to prop up his premise? Tracing bibliographic references are the historical audit trail that enables us to see where we have come.

### Picking up the pace

In retrospect, this was the process of refinement at work again. An author builds upon the work of a previous generation on the road to commercialization.

Perhaps the pace of technology is so fast that no one had time to stop off and try to apply the work of Mills. Therefore, his system never came into wide spread use. Why use the old when there is something new? As a matter of fact, I used his method in creating a design document on an IBM project. When the work came up for review by some of my peers, they complained about my use of the structures. They could not argue with the logic. I informed the group that Mill's work had been sanctioned by the Federal Systems Division of IBM.

Reviewing bibliographies requires retrieval of the article, reading it and possibly finding another reference that pre-dates the current work. The path is never straight. Doing this extra work, you gain the ability to refine your thinking and approach to solving problems using current technology with a higher degree of self confidence. It also helps to live close to a good university engineering library.

### And, er, this relates to OS/2

### how...?

How does this have anything to do with OS/2? Looking at the history of OS/2 across all the releases by IBM, each step was a refinement and improvement. Version 1 looked like a text based mainframe emulator screen with two panels; one contained the switch list. You could round robin to each running application. Finally, the Presentation Manager became the graphical user interface. With version 2, the Workplace Shell and a new idea called the System Object Model (SOM) gave us a more configurable object oriented desktop.

Refinements in the graphics engine, memory management and optimization is proof that the thousands of refinements from the research lab, product test and development leading to entry into the marketplace for a product like OS/2, pretty much proves that refinement has played a significant role in the software utilities, tools and applications in use today.

### Improving our tools

Compilers also improved as did version control and quality assurance over the development life cycle of OS/2. The inter-dependency of OS and compiler capability is evident during this time period.

For example, an important milestone would have been crossing the Intel 80286 to 80386 boundary. If you wanted your OS to be 32 bit, you needed assemblers and compilers that were 32 bit in the sense that they could handle near and far addressing. 32 bit microprocessors imply higher performance. There is no gain unless you take some pain. Unless you change the 16 bit code to 32 bit, the processor will be under utilized. This was done incrementally across releases for OS/2. Something as subtle as the graphics programming interface function returning a type long instead of a short, implies better graphics capability coming out of the refinement to 32 bit. The video device drivers have to be modified to 32 bit before a developer programming graphics could take advantage of these improve-

ments. The list goes on from advances in memory management to improvements in the linker and OS/2 loader.

Software engineering students would do well to read about the work Dr. Mills contributed to computer science. The principles of analysis and design Professor Mills taught still apply today in describing the logic of a system. The weather buoy is analogous to many business applications. An independent system, an object receiving stimulus, containing state data that can be abstracted within a class and a useful output from methods that operate on the object. The buoy is a small enough model to study, a stepping stone to larger systems.

Recently, the refinement process escalated to a new level by Grady Booch, James Rumbaugh and Ivar Jacobson. Their successful development of the Unified Modeling Language (UML) focused on standardizing the process of analysis and design. Engineers use the UML to represent models of software systems. A finer appreciation of where we are today can be realized when you study the evolutionary history and see how these men merged their methods into a unified process for developing software. ♦

# MOTE: A game difficult to master!

Review

by Jason, Eric, and Niels Jensen

Trillium Software Products' Master of the Empire (MOTE) is a new strategy game for OS/2. The game's aim is to conquer the empire by defeating the enemies and constructing the appropriate means for victory, such as infantry, airplane (bomber and fighters), tanks, and ship. If you like strategy games, this game may be for you.

The installation routine creates a program icon for MOTE and a directory in the root of the drive you select. I would have liked the install to be a bit more flexible. For example, I would have liked to install the game in a games directory or my os2apps directory. This is a small nuisance, easily fixed using drag 'n' drop in the appropriate drive tree.

## Running the game

Upon starting MOTE, the program window appears on the desktop in the lower left hand corner. On top of the program window appears a quite impressive IBM Ultimotion start-up video, similar to the Macaw video, which comes with OS/2. After hitting Enter three times to get past a series of credits, you can begin to play.

The program window is divided in four areas: a navigation panel, an overview map, a detailed map of your current battle field, and a statistics area. With the GRADD drivers the overview map is invisible. The program window appears to be fixed to 600x800, so on my 17" monitor at 1024x768 it only uses a fraction of the real estate. I refuse to change screen resolution and reboot just to play a game.

Program documentation is an HTML file. This may make the documentation platform-independent, but it also means that documentation and context sensitive help is not easily accessible during game play. I am a bit conservative, and I prefer to have documentation accessible from the program window.

Since I am not much of a game player—except for simple ones like Klondike Solitaire—I teamed up with my two sons, Jason and Eric, to better describe how the game is played.

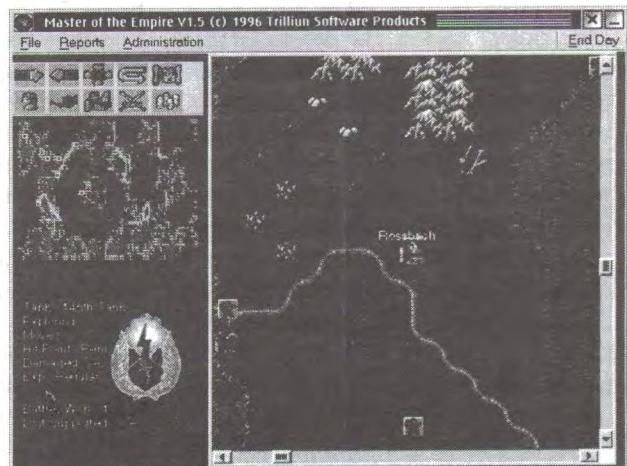
### Jason's viewpoint (grade 6)

You start a new game or load an ongoing game from the file menu. A screen allows you to set certain game parameters: overview map hidden or unhidden, number of cities in the area (1-5), amount of start money (called zubles) that you can spend (100-9000). On a second screen, you select the difficulty of the field to battle on (level 1-3) and how good your computer controlled opponents are. On a third screen you choose the name of your empire and the name of its ruler (you).

#### Master of the Empire

\$25.00

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This is a view of the program window. The playing area is divided in four sections: a large detailed map to the right and to the left from top to bottom: a navigation panel, an overview map and a unit information area. The overview map may be replaced with certain statistical information.

Finally, a capital control screen comes up which allows you to set the tax rate (war costs money!) and choose which type of units to create first, e.g. infantry or tank. Your first unit is free, but later in the game you either have to wait the time it takes to create the chosen unit or spend zubles. Finally you are ready to play!

You move your units, such as infantry and tanks, by left clicking on them and using the arrow keys to move the unit. You may only move one unit at a time. When you are outside of a city, the bottom left corner of the program window contains detailed information about your unit. You enter a city by right clicking on it. If you want your unit to do anything other than move or attack, you have to right click on it. Your options depends on the unit, but some of the actions are: sentry, harden a city, make a resource (creating a manmade resource is a risky task—if it works, the unit has to stay there to maintain the resource, if it doesn't work, the unit disappears), build an airport, auto explore, launch plane, drop paratroopers, unit info (you can rename the unit, find the cost of the unit, or see a picture of it), cargo onboard, disband or nothing.

If you have used all your moves you press the "next day" button in the upper right hand corner of the program window. Then your enemies react to your move(s). To attack you simply move your unit into an enemy city or unit.

The game has realistic rules. For example, you may only create ships in coastal cities. You win the game by exterminating all of your enemies. The readme files mentions a

"World Builders Guide," but no such guide appears to be available on the CD.

My final opinion of MOTE: In the beginning it is fun to play, but after you win it gets boring, because there is only one way to win: exterminate the enemy. You can sign treaties, but the only way to win is still to kill all the enemies. This is different than Galactic Civilization Gold, for example. MOTE appears to be similar to War Lords, at least on the surface.

#### **Eric's viewpoint (grade 8)**

Basically, I agree with Jason's views, but I would like to add some additional playing information. The game terrain plays a key role in the strategy you need to use in order to win. This is because every unit has its own movement options, which you need to know to master the game.

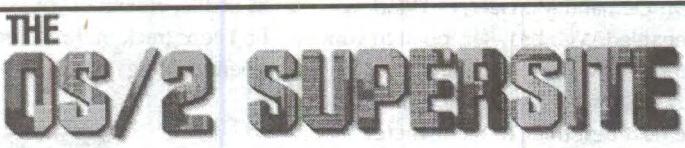
Many things are obvious: ground troops move better on roads than across the landscape, and airplanes alone cannot overtake a hostile city. The city placement is not your choice, but their placement is vital to what you can do. You can only produce ships in coastal cities, and airports cannot be built everywhere. Generally, the more cities you have the better your chances of winning the game.

#### **Conclusion**

MOTE has the potential to become a good strategy game for OS/2. However, the military hardware you have at your disposal is fixed in time, since there are no options to advance current technology or create new technology. The installation program should be a bit smarter, and screen resolutions greater than 600x800 should be supported. Alternatively the game should be bundled

with video drivers which allow you to change screen resolution on the fly under OS/2. ☺

Jason, Eric and Niels live in Slangerup, Denmark. Jason was born in Canada and currently is in grade six in a local primary school. Eric, also born in Canada, currently attends grade 8 in the local secondary school. Both enjoy playing computer games and are heavily into Advanced Dungeon & Dragons. Niels is their Dad, who convinced them OS/2 was a good OS by buying Galactic Civilization II.



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# New and improved

compiled by Esther Schindler

Here's the monthly batch of new and updated OS/2 applications. This seems to be OS/2 Utility Month—that's most of what arrived in the grab bag.

## Power Listviewer 99

Power ListViewer 99 is a utility for OS/2, Windows 95, and Windows NT, which allows you to read mailing list messages in an easy to follow, subject-threaded format. Power ListViewer 99 can read both digest files and regular email files. It's available at BMT Micro for \$29.95. Find out more at [www.bigfoot.com/~PowerListviewer](http://www.bigfoot.com/~PowerListviewer).

## JAVAX.COMM for OS/2

Aquila Systems ported a javax.comm API, which lets your Java program access communications ports. Find it at [www.aquilasys.com/javacomms.html](http://www.aquilasys.com/javacomms.html).

## Desktop On-Call

How would you like to remotely control your PC or server using almost any Web browser?

IBM's got a handy little utility for you: Desktop On-Call. Desktop On-Call can be installed on OS/2 Warp, Warp Server, WorkSpace On-Demand Manager, or Windows PCs. Using any Java-enabled Web browser, point to your PC, type in your ID and password, then go ahead and control the desktop. Copy a file from your PC to your Web client if you like. It's the next best thing to being there!

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Download Desktop On-Call by visiting IBM Direct at [www.direct.ibm.com](http://www.direct.ibm.com). Search for "Desktop On-Call" (IBM part number 31L2729). The cost is \$39.95. You won't have long to wait—the download is only about 2 MB.

Desktop On-Call is produced by IBM Japan. IBM Japan translates the Japanese version into English, but sometimes that takes a bit of time. Right now, Desktop On-Call Version 2.0 is available in the U.S. exclusively through "electronic software delivery" (ESD). You can order it and download it online, and (subject to the terms and conditions of your online dealer), get a refund if you erase it.

Version 2.0 is designed to install on Windows 95, 98, or NT. Version 2.5 adds a version for OS/2 Warp, so you can control an OS/2 Warp desktop from your favorite Java-enabled Web browser. That version is not yet available for

sale in the U.S. IBM says, "Stay tuned for further information." If you're interested in the Japanese versions, including evaluation versions, please visit [www.ibm.co.jp/pspjinfo/javadesk](http://www.ibm.co.jp/pspjinfo/javadesk).

By the way, IBM Japan also produces a great little web browser for DOS. In Japan it's called "Webboy," and in the U.S. it's called "Homepage Surfer for DOS." Yes, Homepage Surfer runs on IBM's "Year 2000 Ready" PC-DOS 2000, so you can put older hardware back into productive use on the Internet or your intranet. It works with both dial-up and LAN connections.

## Rover Pack

Sundial Systems Corporation and Orange Hill Software have begun shipping the Rover Pack for OS/2.

The Rover Pack is a collection of tools for navigating and managing an OS/2 Workplace Shell desktop in a useful and even fun way. Rover, the desktop retriever, is the star of the show. Rover tries to stay close at hand and ready to open the desktop objects (programs, folders, etc.) that you use. He takes the form of a little window that "roves" around your desktop trying to stay in "empty space"—available, yet out of your way. And like a good companion, he keeps track of the objects he fetches for you... ready to open them again if the need should arise.



The Rover Pack is based on a unique set of technologies, pioneered by Orange Hill, to provide this type of Workplace Shell enhancement in a way that is highly unlikely to conflict with other desktop enhancement products or Workplace Shell extensions.

"Rover, and the rest of the Rover Pack collection, is a deceptively simple product" noted Dr. Randell Flint, President of Sundial Systems. On the surface, it's just another toolbar or menu type of gadget. But the idea of grouping desktop objects together into 'baskets' is truly unique and useful. And that roving window as a 'hot spot' to navigate

from—now that's an inspired new paradigm indeed."

The Rover Pack carries a suggested retail price of \$49. Under a special Adoption Offer, you can take Rover home for just \$35 (plus shipping and handling) until June 30, 1999.

For further information on the Rover Pack and Sundial Systems, visit the Sundial Systems Web site at [www.sundialsystems.com](http://www.sundialsystems.com) or contact Sundial Systems at (562) 596-5121 or (562) 596-5366.

### Larsen Commander

Larsen Commander 0.97 is a 32-Bit OS/2 Presentation Manager based File Manager with built-in command line and scrollable console monitor. It is inspired by the grand old Norton Commander for DOS and the great File Commander/2 for OS/2.

You can download it from <http://home.sol.no/~leilarse/lcmd/index.html>.

Larsen Commander has a built-in GUI Console and command line prompt with history. You can set environment variables directly in the shell. It supports drag and drop to and from the OS/2 Workplace Shell, and preserves the command and directory history between sessions.

Larsen Commander has command line extensions, including PUSHD, POPD, R, SET, TAG, WHICH, and +++, and it has auto filename completion (like 4OS2) when pressing Ctrl+Tab. A smart dynamic file-

name search works by pressing Alt+letter, and it has an extended attribute viewer.

This version has user customizable menus and an internal resource script compiler. A new internal command, FINDDUP, finds duplicate files in any search path, including the LIBPATH.

You can download Larsen Commander from <http://home.sol.no/~leilarse/lcmd/index.html>.

### PM Make updated

Probably the most comprehensive PM-based make program available, this product performs the core functions of make, backup and restore, as well as being totally tools independent. (Make is a programmer's tool that automatically determines which pieces of a program need to be recompiled.) PM Make can manage projects spread over directories, split into myriad subdirectories, numerous output files including several .exe, .inf, .hlp, etc. in one make. PM Make provides plugin DLLs, push button control of tools options, library selection, selective backup, restore and more. PM Make is multithreaded and never gives you a wait pointer. You can safely run multiple instances of PM Make. In conjunction with Program Editor, you can stop on errors and fix bugs on the fly. It has a small memory footprint and is supplied with full operating instructions, and plugin DLL source.

This version includes some minor fixes and some small changes to the documentation.

PM Make is \$39.90, and is available at BMT Micro.

### fax103

After a long period of absence from the Web, the only free OS/2 faxing solution is back again. It's a refreshed version of fax103.lzh, containing command line solutions for receiving and sending faxes, making an answering machine, and more. It is built by Dr.Pollack from Austria and can be downloaded at [www.buntspecht.de/fax](http://www.buntspecht.de/fax).

Thanks to Dr.Pollack and Marcus Specht from buntspecht.de for finding a working solution to give Fax back to the OS/2 community.

Please don't upload fax to other servers!

### SFX Installer

Pillarsoft released the SFX Installer, the first one file archive/installation tool widely available on the OS/2 platform. It marries the installation tool for your software and its own setup tools into one package for point and click installation setups that are personalized for your software. SFX allows you to build an archive in standard or self-extracting format, with or without the installer.

There are no cryptic scripts to learn to write other than any setupstrings you need

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to place folders and icons on the desktop. The installation setup tool allows you to point and click a complete setup. When you are satisfied with how the archive should be setup you can save all the information and recall it when needed. SFX will save and retrieve as many setups as you have disk space for and will help the author of multiple programs to keep them organized. It can also be used as a general zip file distribution builder as well.

The SFX Installer includes several novel details for the software distributor including DLL and help file placement (and tracking) into existing LIBPATH and SET HELP directories so your user may avoid adding to

these paths and also avoid rebooting before usage. An uninstallation script is written at install time, specific to the users installation, that tracks all files your program has installed and removes WPS objects created at installation time. This uninstall script can be modified via a plugin.

Authors can make use of Plugin scripts to overcome any installation limitations that your installations need to perform. Examples are included.

Although the installer is distributed as shareware, freeware authors are invited to use the installer free of charge. Please read the license for more details.

More information is available at [www.pillarssoft.net](http://www.pillarssoft.net).

## CAD/Off

Thorsten Thielen ([thth@gmx.net](mailto:thth@gmx.net)) released CAD/Off 1.01, a small utility that disables the Ctrl-Alt-Del keys for rebooting. It enables them again after system shutdown, so you can reboot the system then. CAD/Off is freeware.

You'll find more information at [www.informatik.uni-trier.de/CIP/thielen/cadoff/](http://www.informatik.uni-trier.de/CIP/thielen/cadoff/).

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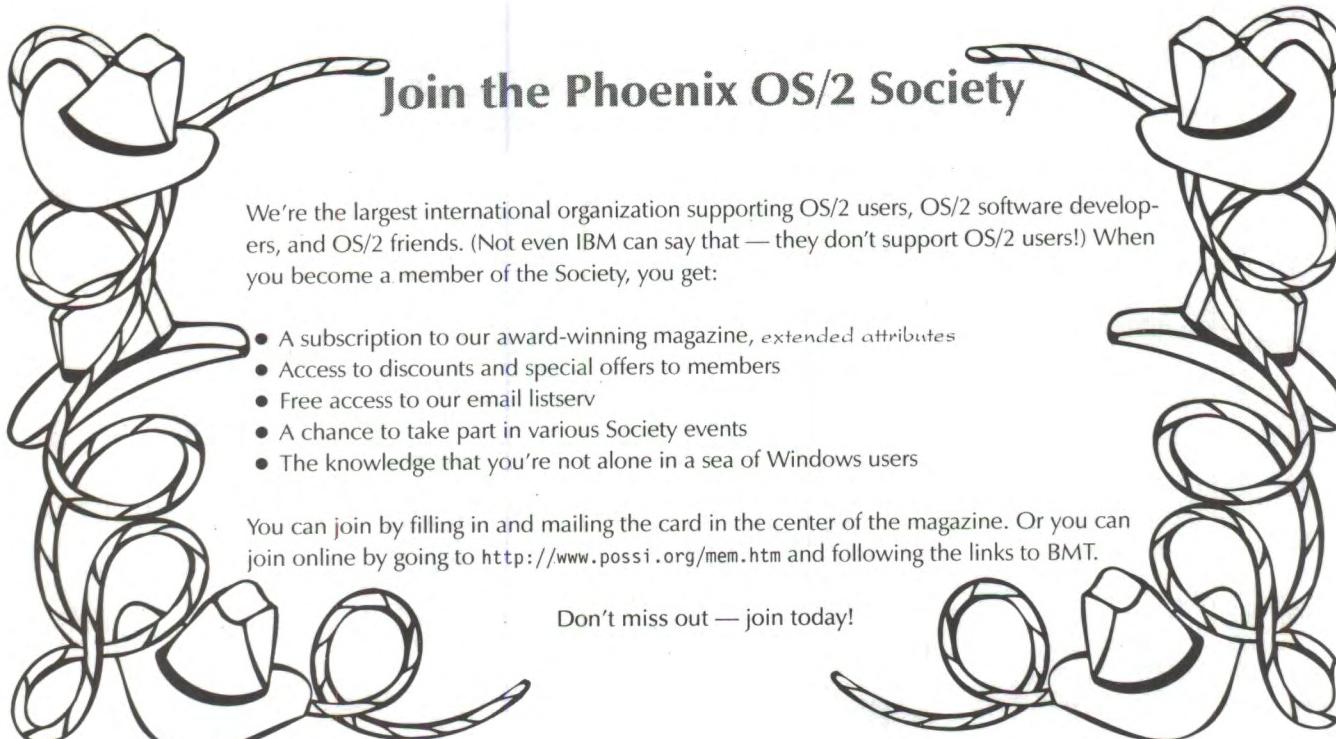
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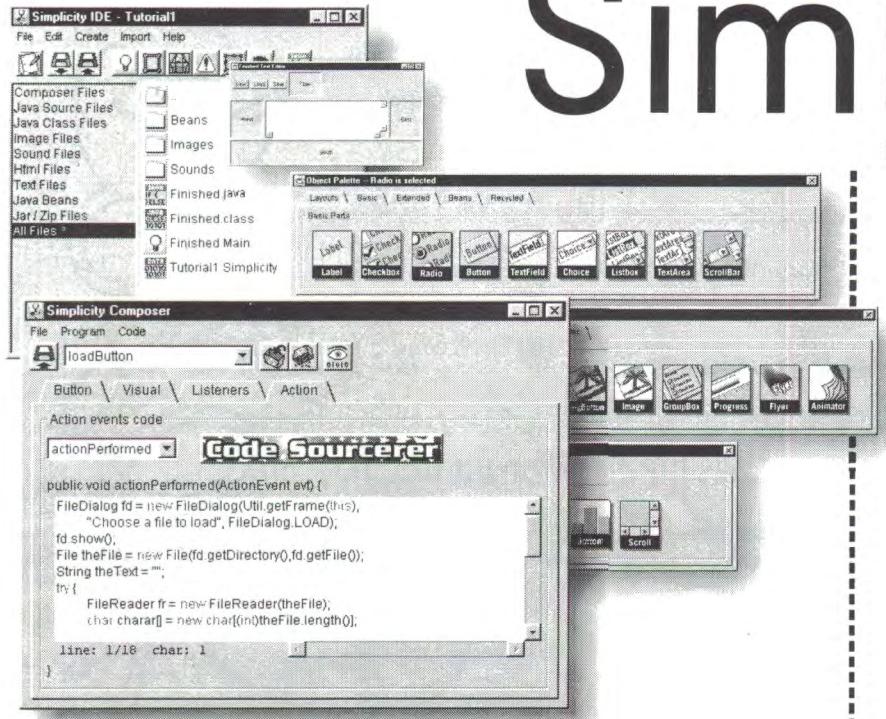
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        "Choose a file to load", FileDialog.LOAD);  
    fd.show();  
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    String theText = "";  
    try {  
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    }  
}
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